

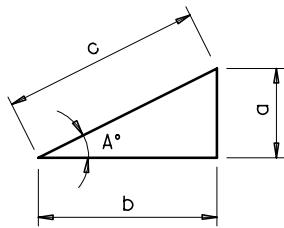
### Trigonometric Formulas

$$c^2 = a^2 + b^2$$

$$\sin A^\circ = a / c$$

$$\cos A^\circ = b / c$$

$$\tan A^\circ = a / b$$



### Properties of The Circle

$$1 \text{ Radian} = 57.29578^\circ$$

$$1 \text{ Degree} = 0.01745329 \text{ Radians}$$

$$\text{Arc } a = (\pi r A^\circ) / 180^\circ$$

$$= 0.017453 r A^\circ$$

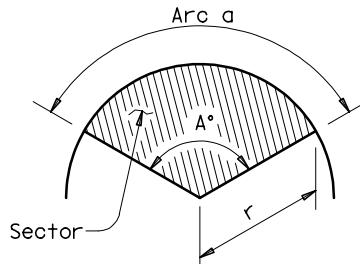
$$\text{Angle } A^\circ = (180^\circ a) / (\pi r)$$

$$= (57.29578 a) / r$$

$$\text{Sector Area} = (a r) / 2$$

$$= 0.0087266 A^\circ r^2$$

$$\text{Radius } r = (4 b^2 + c^2) / 8 b$$



$$\text{Chord } c = 2 \sqrt{(2 b r) - b^2}$$

$$= 2 r \sin (A^\circ / 2)$$

$$\text{Rise } b = r - .5 \sqrt{4 r^2 - c^2}$$

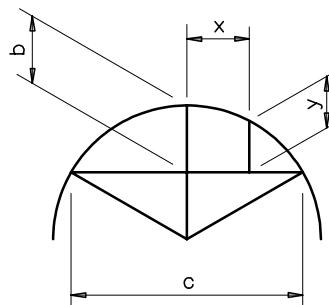
$$= .5 c \tan (A^\circ / 4)$$

$$= 2 r \sin^2 (A^\circ / 4)$$

$$= r + y - \sqrt{r^2 - x^2}$$

$$y = b - r + \sqrt{r^2 - x^2}$$

$$x = \sqrt{r^2 - (r + y - b)^2}$$



$$\text{Segment Area} = \frac{\pi r^2 A^\circ}{360} - \frac{r^2 \sin A^\circ}{2}$$

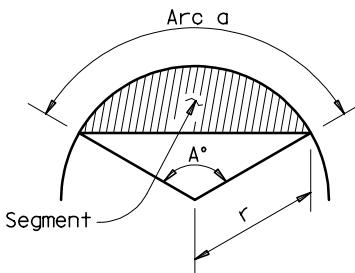


Fig. 1-4